

 accenture

 ODTUG
Oracle Developer & Technology User Group

Oracle Enterprise Manager EM24ai

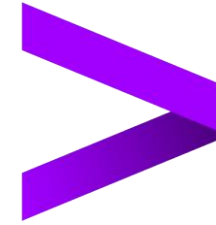
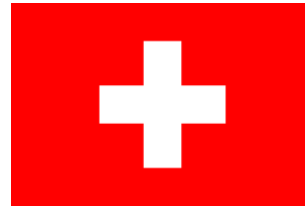
Oracle Enterprise Manager 24ai - Be the Patchinator!

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Oracle ACE
Pro



Database Platforms - Data Eng, Mgmt & Governance Mgr

Kestenholz / Jurasüdfuss / Schweiz

2 Junior-DBAs (11 & 13)

Firefighter 2nd in command

E-Biker / Running-Beginner

Cloud Enthusiast



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www.martinberger.swiss

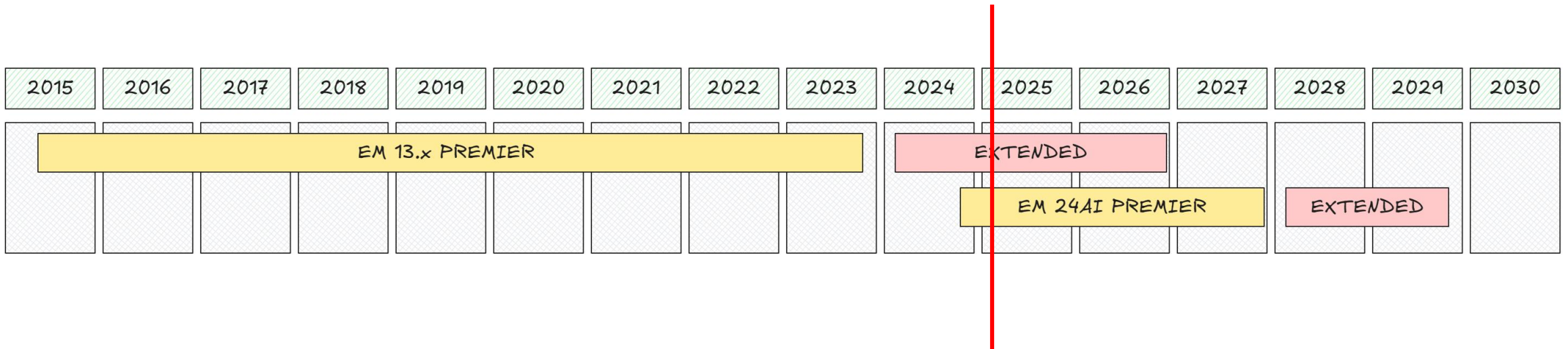


Agenda

- 01** Basics
- 02** OMS RU
- 03** OMS Holistic
- 04** Agent
- 05** Misc

Basics

Lifetime Support Policy



Primary Note for Enterprise Manager Certification and Lifetime Support Policy (Doc PNEWS2124)

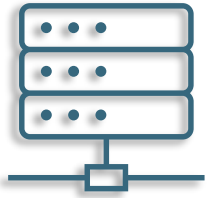
13.5: Long term waived extended support till Dec 2026

24: Premier support till end of Dec 2027 and extended support till end of Dec 2029

Sustaining is in state Indefinite



Enterprise Manager Main Components



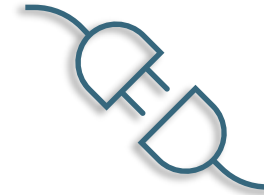
Oracle Management
Server



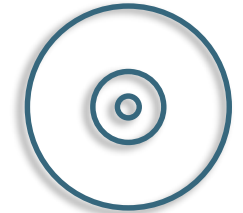
Repository
Database



Agent

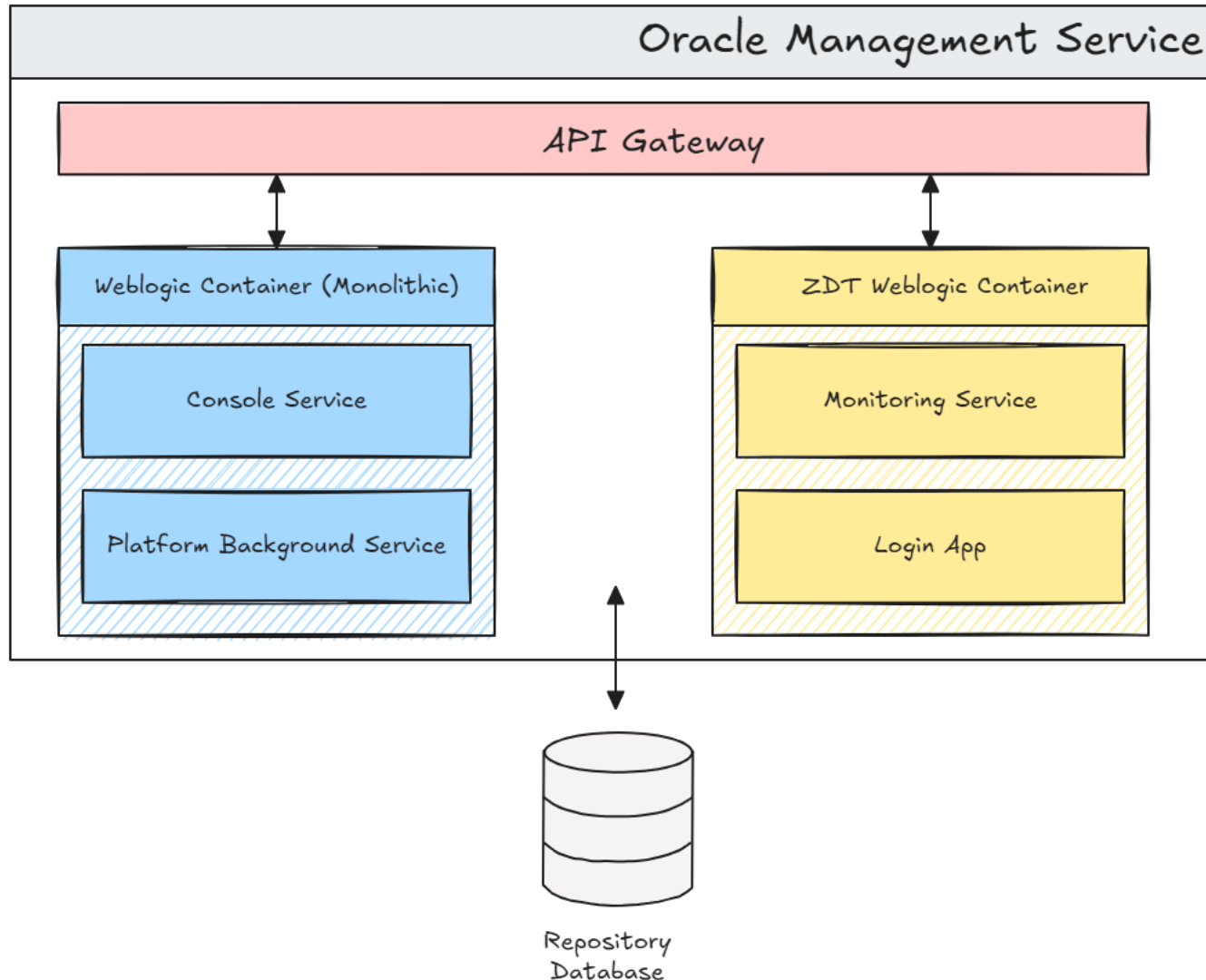


Plug-Ins



Operating System

ZDT OMS - Architecture



Two Containers

- Traditional WebLogic container
- ZDT WebLogic container for uninterrupted monitoring

API Gateway

- Single entry point for UI traffic, API calls, Agent upload

Under the Hood – A new Weblogic Domain

The screenshot displays the Oracle WebLogic Server Administration Console. The top navigation bar includes 'Home', 'Log Out', 'Preferences', 'Record', and 'Help'. A red warning banner states 'Security warnings detected. Click here to view the report and recommended remedies.' The user is logged in as 'weblogic' and connected to 'EMExtDomain1'. The breadcrumb trail shows the path: Home > Summary of Servers > EMEXT_OMS1_ZDT > Summary of Deployments > emlogin(24.1.0.0.0,24.1.0.0.0) > EMExtDomain1 > Summary of Deployments > Summary of Servers > EMExtDomain1 > Summary of Deployments > Summary of Servers.

The main content area is titled 'Summary of Servers' and has two tabs: 'Configuration' (selected) and 'Control'. It contains the following text:

A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration.

This page summarizes each server that has been configured in the current WebLogic Server domain.

Below the text is a table with the following data:

| Name | Type | Cluster | Machine | State | Health | Listen Port |
|--------------------------|------------|---------|---------------|---------|--------|-------------|
| EMEXT_ADMINSERVER(admin) | Configured | | | RUNNING | OK | 7001 |
| EMEXT_OMS1_ZDT | Configured | | EMEXT_MACHINE | RUNNING | OK | 7601 |

The table includes 'New', 'Clone', and 'Delete' buttons above and below it. The page also features a 'Change Center' on the left with 'Lock & Edit' and 'Release Configuration' buttons, a 'Domain Structure' tree, and a 'How do I...' section with links like 'Create Managed Servers' and 'Clone servers'. The 'System Status' section shows 'Health of Running Servers as of 7:45 PM'. The URL at the bottom is 'https://oms-kestenholz.internal:7016/console/console.portal?_nfpb=true&_pageLabel=CoreServerServerTablePage'.



ZDT Architecture

```
db* basenv [2026-11-20 11:57:49]
[opc@oms-kestenholz ~]$ sudo su - oracle

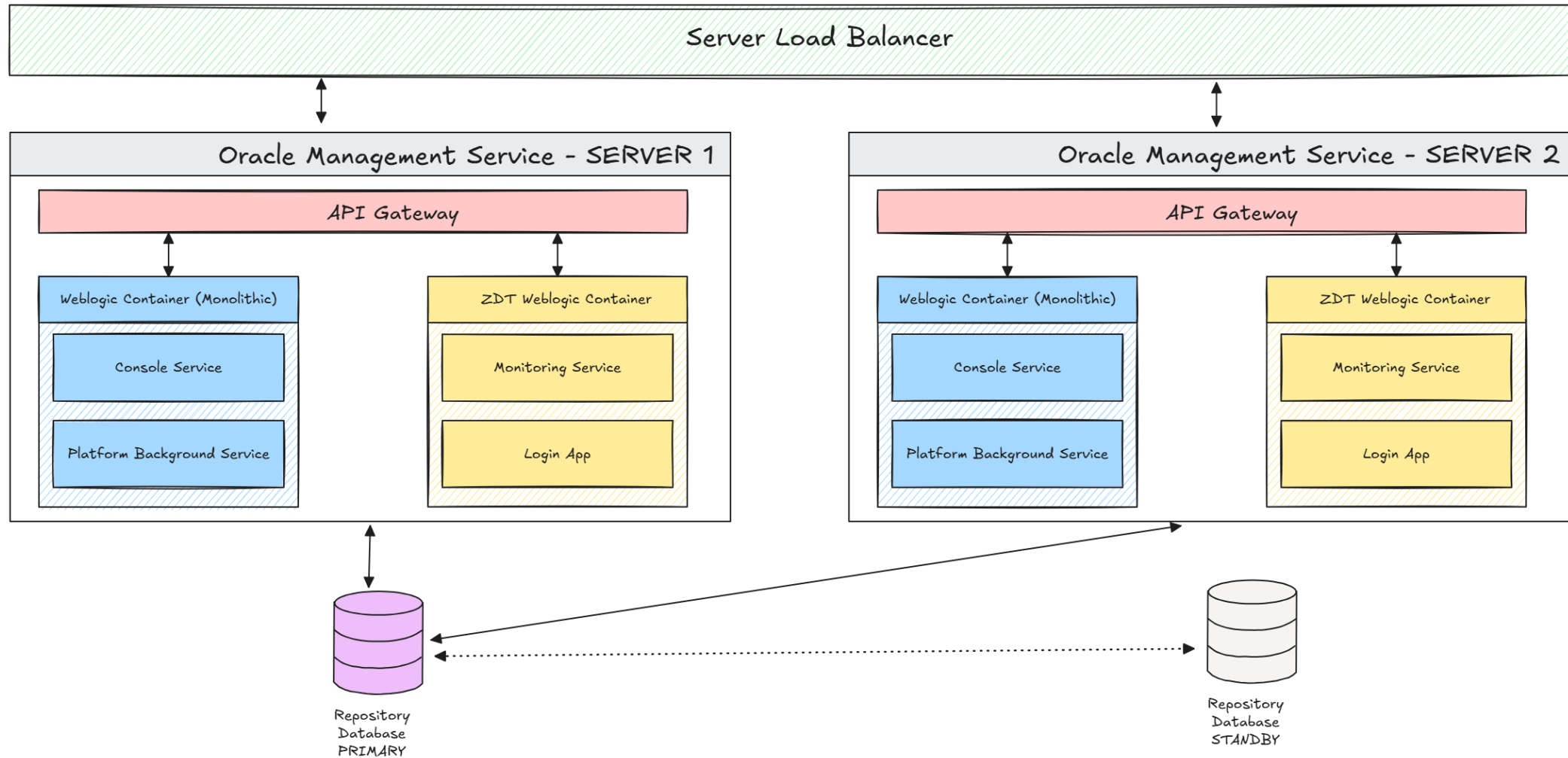
TYPE (Cluster|DG) : SID/PROCESS      STATUS      HOME
-----
API Gateway      :                               up          /u01/app/oracle/middleware/ext_oms_home/apigateway
Agent            : emagent24                      up          /u01/app/oracle/agent/agent_inst
WLS admin       : EMEXT_ADMINSERVER             up          /u01/app/oracle/middleware/ext_oms_home/wlserver
WLS admin       : EMGC_ADMINSERVER              up          /u01/app/oracle/middleware/oms_home/wlserver
WLS mgmt        : EMEXT_OMS1_ZDT                 up          /u01/app/oracle/middleware/ext_oms_home/wlserver
WLS mgmt        : EMGC_OMS1                      up          /u01/app/oracle/middleware/oms_home/wlserver
WLS node        : 1                              up          <REDACTED>/user_projects/domains/EMExtDomain1/nodemanager
WLS node        : 1                              up          <REDACTED>/user_projects/domains/GCDomain/nodemanager
```



24ai - Zero Downtime (ZDT) Architecture

- ZDT Allows applying Enterprise Manager 24ai Release Updates (RUs) while the part of the OMS remains **ONLINE**.
- Ensures continuous monitoring of critical targets during planned maintenance windows and engage **RULES**.
- Uses the **OMSPATCHER** utility to patch the OMS without service interruption.
- Leverages Oracle Database **EDITION-BASED-REDEFINITION** (EBR) to update EM schema components in a separate edition while EM is actively in use.

EM24ai - Multi OMS



How ZDM Works – Patch Host oms-kestenholz

| oem_console_back | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|-------|-----|-------|--------------|-----|-------|----------|-----|--------|-------|-------|------|-------|-----|--------|------|--------|------|------|----------|-------|---------|--|
| | Queue | | | Session rate | | | Sessions | | | | | | Bytes | | Denied | | Errors | | | Warnings | | Status | |
| | Cur | Max | Limit | Cur | Max | Limit | Cur | Max | Limit | Total | LbTot | Last | In | Out | Req | Resp | Req | Conn | Resp | Retr | Redis | | |
| oms-kestenholz.internal | 0 | 0 | - | 0 | 0 | | 0 | 0 | - | 0 | 0 | ? | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 4s DOWN | |
| oms-oensingen.internal | 0 | 0 | - | 0 | 0 | | 0 | 0 | - | 0 | 0 | ? | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 4s UP | |
| Backend | 0 | 0 | | 0 | 0 | | 0 | 0 | 26 213 | 0 | 0 | ? | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 4s UP | |

| oem_upload_front | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|-------|-----|-------|--------------|-----|-------|----------|-----|---------|-------|-------|------|-------|-----|--------|------|--------|------|------|----------|-------|--------|--|
| Frontend | Queue | | | Session rate | | | Sessions | | | | | | Bytes | | Denied | | Errors | | | Warnings | | Status | |
| | Cur | Max | Limit | Cur | Max | Limit | Cur | Max | Limit | Total | LbTot | Last | In | Out | Req | Resp | Req | Conn | Resp | Retr | Redis | | |
| Frontend | | | | 0 | 0 | - | 0 | 0 | 262 127 | 0 | | | 0 | 0 | 0 | 0 | 0 | | | | | OPEN | |

| oem_upload_back | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|-------|-----|-------|--------------|-----|-------|----------|-----|--------|-------|-------|------|-------|-----|--------|------|--------|------|------|----------|-------|---------|--|
| | Queue | | | Session rate | | | Sessions | | | | | | Bytes | | Denied | | Errors | | | Warnings | | Status | |
| | Cur | Max | Limit | Cur | Max | Limit | Cur | Max | Limit | Total | LbTot | Last | In | Out | Req | Resp | Req | Conn | Resp | Retr | Redis | | |
| oms-kestenholz.internal | 0 | 0 | - | 0 | 0 | | 0 | 0 | - | 0 | 0 | ? | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 3s DOWN | |
| oms-oensingen.internal | 0 | 0 | - | 0 | 0 | | 0 | 0 | - | 0 | 0 | ? | 0 | 0 | | 0 | | 0 | 0 | 0 | 0 | 4s UP | |
| Backend | 0 | 0 | | 0 | 0 | | 0 | 0 | 26 213 | 0 | 0 | ? | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 4s UP | |



How ZDM Works – Patch Host oms-oensingen

| oem_console_back | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|-----|-------|--------------|-----|-------|----------|-----|--------|-------|-------|-------|---------|-----------|--------|------|--------|------|------|----------|-------|------------|--|--|
| Queue | | | Session rate | | | Sessions | | | | | | Bytes | | Denied | | Errors | | | Warnings | | Status | | |
| Cur | Max | Limit | Cur | Max | Limit | Cur | Max | Limit | Total | LbTot | Last | In | Out | Req | Resp | Req | Conn | Resp | Retr | Redis | Status | | |
| 0 | 0 | - | 0 | 57 | | 0 | 52 | - | 210 | 0 | 1m57s | 285 666 | 2 597 946 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12m32s UP | | |
| 0 | 0 | - | 0 | 0 | | 0 | 0 | - | 0 | 0 | ? | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5m14s DOWN | | |
| 0 | 0 | | 0 | 57 | | 0 | 52 | 26 213 | 211 | 0 | 1m57s | 285 666 | 2 597 946 | 0 | 0 | | 0 | 0 | 0 | 0 | 16m42s UP | | |

| oem_upload_front | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|-----|-------|--------------|-----|-------|----------|-----|---------|-------|-------|------|-----------|---------|--------|------|--------|------|------|----------|-------|--------|--|--|
| Queue | | | Session rate | | | Sessions | | | | | | Bytes | | Denied | | Errors | | | Warnings | | Status | | |
| Cur | Max | Limit | Cur | Max | Limit | Cur | Max | Limit | Total | LbTot | Last | In | Out | Req | Resp | Req | Conn | Resp | Retr | Redis | Status | | |
| | | | 0 | 14 | - | 0 | 10 | 262 127 | 317 | | | 1 360 298 | 690 710 | 0 | 0 | 0 | | | | | OPEN | | |

| oem_upload_back | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|-----|-------|--------------|-----|-------|----------|-----|--------|-------|-------|-------|-----------|---------|--------|------|--------|------|------|----------|-------|------------|--|--|
| Queue | | | Session rate | | | Sessions | | | | | | Bytes | | Denied | | Errors | | | Warnings | | Status | | |
| Cur | Max | Limit | Cur | Max | Limit | Cur | Max | Limit | Total | LbTot | Last | In | Out | Req | Resp | Req | Conn | Resp | Retr | Redis | Status | | |
| 0 | 0 | - | 0 | 7 | | 0 | 4 | - | 182 | 179 | 2s | 1 040 864 | 445 455 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 12m33s UP | | |
| 0 | 0 | - | 0 | 14 | | 0 | 9 | - | 138 | 138 | 5m24s | 319 434 | 245 255 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5m14s DOWN | | |
| 0 | 0 | | 0 | 14 | | 0 | 9 | 26 213 | 317 | 317 | 2s | 1 360 298 | 690 710 | 0 | 0 | | 1 | 0 | 3 | 0 | 16m42s UP | | |



Which Monitoring Fits Best

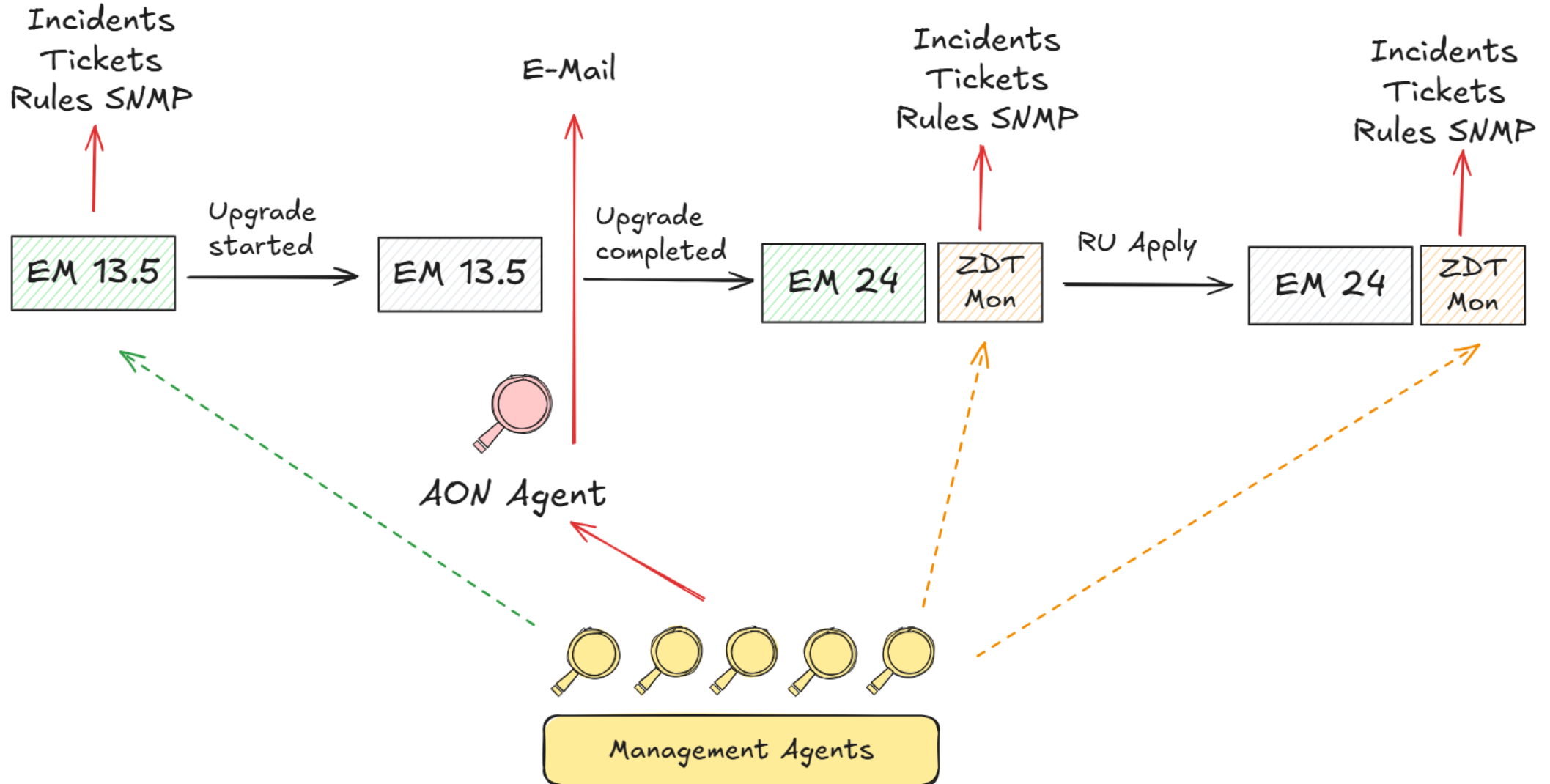
Always-On (AOM)

- Target availability only
- Email only to Contact
- Separate Repository
- Critical Alerts
- Fits for 13.5 > EM24ai Upgrade

Zero Downtime (ZDT)

- Honors incident rule sets
- Event compression
- Multiple notification channels
- Ticketing Connectors
- Event Connectors

Ensure Monitoring during EM24ai Upgrade



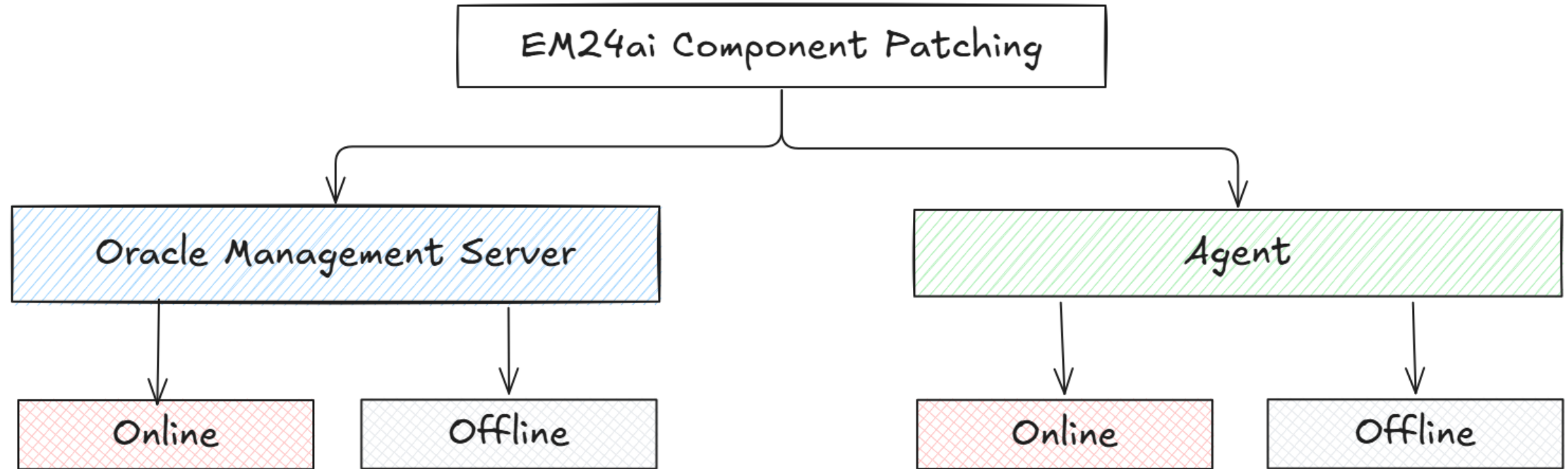
Backup First

- Repository Database by **RMAN**
- Enterprise Manager by **EMCTL**

Backup before Patch

```
$ mkdir /u01/app/oracle/admin/em24aioms/backup  
  
$ emctl exportconfig oms -dir  
/u01/app/oracle/admin/em24aioms/backup
```

Online or Offline



Online of Offline Mode

Online Mode – Internet Connection

- YES:
 - Search and download patches from MOS
 - Access community information, knowledge articles, service requests.

Offline Mode – No Internet Connection

- NO:
 - Search and download patches from My Oracle Support.
 - View additional information about the patch.
 - Access community information, knowledge articles, service requests.

Offline Patching

Go online for optimal usability. Allow Enterprise Manager to connect to My Oracle Support to download patches, get the latest health checks, download self-updates and more. This is a one-way connection and outside services cannot connect to Enterprise Manager. No customer data is sent from Enterprise Manager to Oracle.

Connection Online
 Offline



No Patch for EM 13.5 to latest version when...

- ...you want to upgrade your EM to version 24ai – or: you wait for RU 08

Release Update

Minimum Upgrade Path to Version 24ai

13.5 RU 29

24ai RU 08 or later

13.5 RU28

24ai RU06 or later

13.5 RU 27

24ai RU 04 or later

13.5 RU 26

24ai RU 02 or later

13.5 RU 25

24ai RU 01 or later

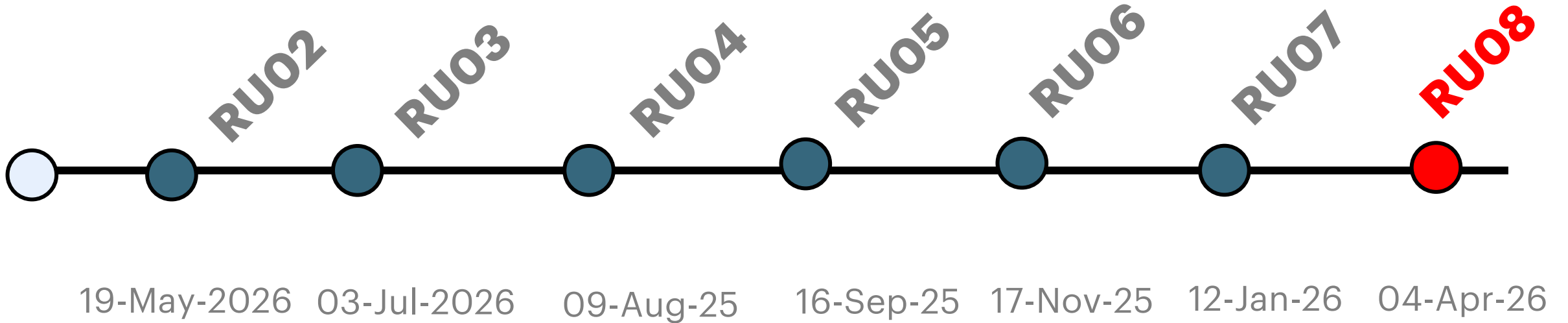
13.5 RU 22 through RU 24

24.1 Base Release or later



OMS Release Update

Oracle Management RU Timeline



Enterprise Manager Cloud Control Updates: List of Available RUs (Release Updates) and PSUs (Patch Set Updates) (Doc KB222111)

New Features by Enterprise Manager 24ai Release

| | |
|-------------|----|
| RU01 | 5 |
| RU02 | 7 |
| RU03 | 12 |
| RU04 | 9 |
| RU05 | 5 |
| RU06 | 11 |
| RU07 | 8 |
| RU08 | 17 |

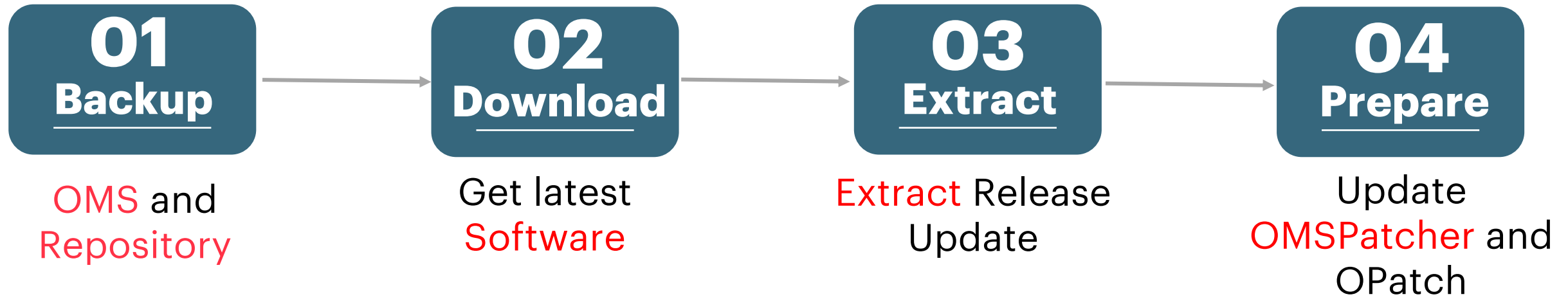


Enterprise Manager 24ai Main Release Update List (Includes Plug-ins) - KA1271

| Latest 24ai OMS Release Update | Version (Release Date) | EM 24ai OMS RU Bug List Note |
|--|---------------------------------|--|
| <p>Patch 38532004</p> <p>You need to upgrade the omspatcher to the latest version per the instructions in My Oracle Support Note: KB371380</p> | <p>RU 07(13-Jan-2026)</p> | <p>- 24ai Enterprise Manager Cloud Control Base Platform Periodic Release Update (RU) 07 Bug List - KB865127</p> |
| Latest 24ai Agent Release Update | Agent RU Version (Release Date) | EM 24ai Agent RU Bug List Note |
| <p>Patch 38532036</p> <p>Verify the correct version of agent patcher (See Patch's README)</p> | <p>RU 07(13-Jan-2026)</p> | <p>- Enterprise Manager Cloud Control Management Agent 24ai Release Update (RU) 07 Bug List - KB865136</p> |



Oracle Management Server - Preparation



Always verify the readme document to ensure correct OMSPatcher and OPatch version.

Update OMSPatcher - Patch 19999993

- Read the README – Section 2: Prerequisites

Version anzeigen

```
$ORACLE_HOME/OMSPatcher/omspatcher version  
OMSPatcher Version: 13.9.24.9.0  
OPlan Version: 12.2.0.1.160sysModel build: Tue Apr 28  
18:16:31 PDT 2020  
OMSPatcher succeeded.
```

Release Update Apply - Traditional versus ZDT

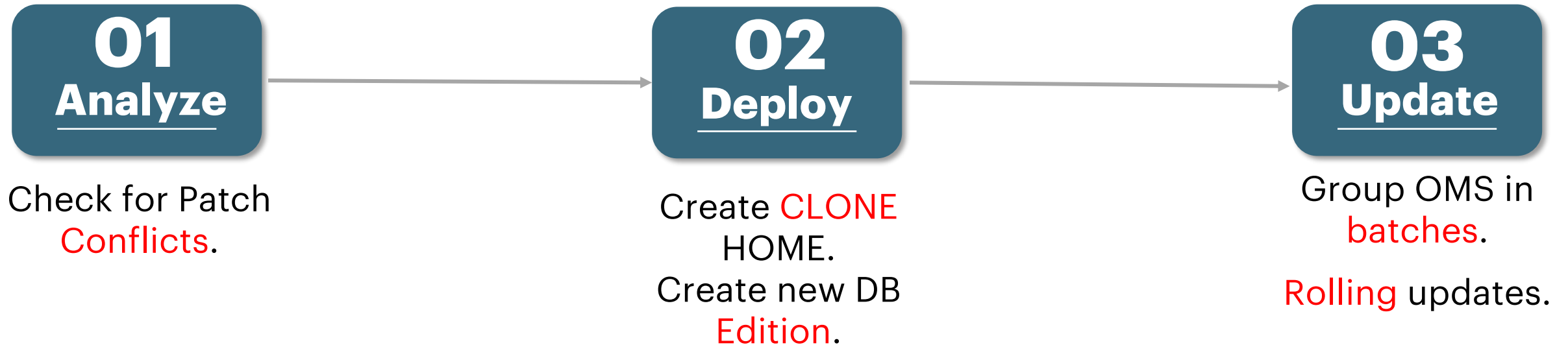
Traditional

- unzip Patch
- omspatcher apply -analyze
- emctl stop oms
- omspatcher apply

ZDT

- unzip Patch
- omspatcher deploy -analyze
- omspatcher deploy
- omspatcher update

Oracle Management Server – Patching ZDT



Always run OMSPatcher with flag `-analyze` to verify system readiness!

Property File 1/2

- OMS automated patching requires the WebLogic Administration Server URL and credentials for patching and configuration detection, as it manages the Managed Server hosting the OMS.
- To avoid re-entering credentials during patching, you can store them in a property file and reuse them with OPatch.

Step 1 – Create Keys

```
mkdir -p /u01/app/oracle/admin/em24aioms/wlskeys
cd /u01/app/oracle/admin/em24aioms/wlskeys

$ORACLE_HOME/OMSPatcher/wlskeys/createkeys.sh -oh $ORACLE_HOME -
location /u01/app/oracle/admin/em24aioms/wlskeys
```

Property File 2/2

Step 2 – Get Information

```
$ $ORACLE_HOME/bin/emctl status oms -details
```

Step 3 – Create File, add URL

```
$ cat em24aioms.properties
```

```
AdminServerURL=t3s://oms-allinone.internal:7102
```

```
AdminConfigFile=/u01/app/oracle/admin/em24aioms/wlskeys/config
```

```
AdminKeyFile=/u01/app/oracle/admin/em24aioms/wlskeys/key
```

Patch Command Example

Set ORACLE_HOME variable and change to Patch Directory

```
$ export ORACLE_HOME=/u01/app/oracle/middleware/oms_home  
$ cd /u01/app/oracle/stage/38322525
```

Deploy -analyze

```
$ORACLE_HOME/OMSPatcher/omspatcher deploy -analyze -property_file  
/u01/app/oracle/admin/em24aioms/etc/24ai.properties
```

OMSPatcher – Status Verification

EMCLI Method

```
$ $ORACLE_HOME/OMSPatcher/omspatcher status  
OMSPatcher Automation Tool  
Copyright (c) 2024, Oracle Corporation. All rights reserved.
```

<REDACTED>

```
Patch ID: 38532004  
Action: Update  
Deployment Mode: Rapid Platform Update  
Update Status: Successful  
Deploy Status: Completed  
Start Time: Mon Feb 02 14:05:25 CET 2026  
End Time: Mon Feb 02 14:37:43 CET 2026  
Deploy Execution Time: 75 Minutes  
Update Execution Time: 32 Minutes
```

```
OMSPatcher succeeded.
```

Opatch - Update

Run Installer

```
cd /u01/app/oracle/stage/oms-ru05 && unzip p28186730_1394221_Generic.zip
```

```
export ORACLE_HOME=/u01/app/oracle/middleware/oms_home
```

```
/u01/app/oracle/middleware/oms_home/OPatch/opatch version
```

```
OPatch Version: 13.9.4.2.17
```

```
OPatch succeeded.
```

```
opatch$ORACLE_HOME/oracle_common/jdk/bin/java -jar
```

```
/u01/app/oracle/stage/6880880/opatch_generic.jar -silent
```

```
oracle_home=$ORACLE_HOME
```

```
/u01/app/oracle/middleware/oms_home/OPatch/opatch version
```

```
OPatch Version: 13.9.4.2.21
```

```
OPatch succeeded.
```

OMSPatcher – Update

Copy and Extract

```
$ export ORACLE_HOME=/u01/app/oracle/middleware/oms_home

$ /u01/app/oracle/middleware/oms_home/OMSPatcher/omspatcher version
OMSPatcher Version: 13.9.24.1.0
<REDACTED>

$ cd /u01/app/oracle/middleware/oms_home
$ mv OMSPatcher OMSPatcher_old

$ cp /u01/app/oracle/stage/p19999993_241000_Generic.zip .
$ unzip p19999993_241000_Generic.zip

$ /u01/app/oracle/middleware/oms_home/OMSPatcher/omspatcher version
OMSPatcher Version: 13.9.24.8.0
<REDACTED>
```

OMS Holistic

Holistic or Release Update

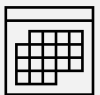
Holistic



Weblogic, JDK, ADF etc.



No ZDT Support



Quartely released



Minimum RU required

Release Update



OEM Fixes and Features



ZDT Supported



OMS Core, Agent, Plugins

Release Update First

| Holistic | Release Update |
|-----------------------------------|----------------------|
| APRIL 2025 Holistic Patch 3770256 | RU 01 Patch 37466946 |
| July 2025 Holistic Patch 38194787 | RU 03 Patch 37826012 |
| Oct 2025 Holistic Patch 38544618 | RU 05 Patch 38155872 |
| Jan 2026 Holistic Patch 38864999 | RU 07 Patch 38532004 |



Patch by order, Release Update before Holistic Patch!



Holistic Command

OEM 24AI: How To Apply/Rollback Holistic Patch On OEM 24.1 (Doc ID 3082475.1)

OMS Components Only

```
$ORACLE_HOME/OMSPatcher/omspatcher apply  
/u01/app/oracle/stage/38194787 -spb_patch
```



AIX only

OMS JDK Included

```
$ORACLE_HOME/OMSPatcher/omspatcher apply  
/u01/app/oracle/stage/38194787 -spb_patch -jdk_update  
<jdk_location>
```



Content Excerpt

linux64_patchlist.txt

```
$ORACLE_BASE/stage/38544618/binary_patches/fmw_dbclient/linux64/  
$ORACLE_BASE/stage/38544618/binary_patches/ohs/linux64/  
$ORACLE_BASE/stage/38544618/binary_patches/oss/linux64/  
$ORACLE_BASE/stage/38544618/binary_patches/adf/generic/  
$ORACLE_BASE/stage/38544618/binary_patches/coherence/generic/  
$ORACLE_BASE/stage/38544618/binary_patches/fmw_thirdparty/generic/  
$ORACLE_BASE/stage/38544618/binary_patches/jdbc/generic/  
$ORACLE_BASE/stage/38544618/binary_patches/owsm/generic/  
$ORACLE_BASE/stage/38544618/binary_patches/rda/generic/  
$ORACLE_BASE/stage/38544618/binary_patches/webcenter/generic/  
$ORACLE_BASE/stage/38544618/binary_patches/wls/generic/
```

Agent

Introduction

Agent Patches fresh Installation

```
./agentpatcher lspatches
AgentPatcher Automation Tool
Copyright (c) 2021, Oracle Corporation. All rights reserved.
```

```
AgentPatcher version : 13.9.24.0.0
OUI version          : 13.9.4.0.0
Running from         : /u01/app/oracle/agent/agent_24.1.0.0.0
Log file location    : /u01/app/oracle/agent/agent_24.1.0.0.0/cfgtoollogs/agentpatcher/opatch2026-03-09_21-02-30PM_1.log
```

| Component Name/Version | Component Type | System Patch | (Sub)-Patches | Patch Description |
|-----------------------------------|----------------|--------------|---------------|--------------------------------------|
| oracle.rsa.crypto/12.2.1.4.0 | Core | N/A | 37087476 | WLS PATCH SET UPDATE 12.2.1.4.240922 |
| oracle.jrf.dms.common/12.2.1.4.0 | Core | N/A | 37087476 | WLS PATCH SET UPDATE 12.2.1.4.240922 |
| oracle.sysman.agent.ic/24.1.0.0.0 | Core | N/A | 37121017 | Non System patch Tracking <REDACTED> |
| oracle.pki/12.2.1.4.0 | Core | N/A | 37096063 | OSS 19C BUNDLE PATCH 12.2.1.4.241001 |
| oracle.ldap.rsrf/12.2.1.4.0 | Core | N/A | 37096063 | OSS 19C BUNDLE PATCH 12.2.1.4.241001 |
| oracle.jse.dms/12.2.1.4.0 | Core | N/A | 37087476 | WLS PATCH SET UPDATE 12.2.1.4.240922 |
| <REDACTED> | | | | |



*Agents installed by Add Target are not patched.
Solutions: a) Patch Plan or b) Golden Image.*



Online or Offline

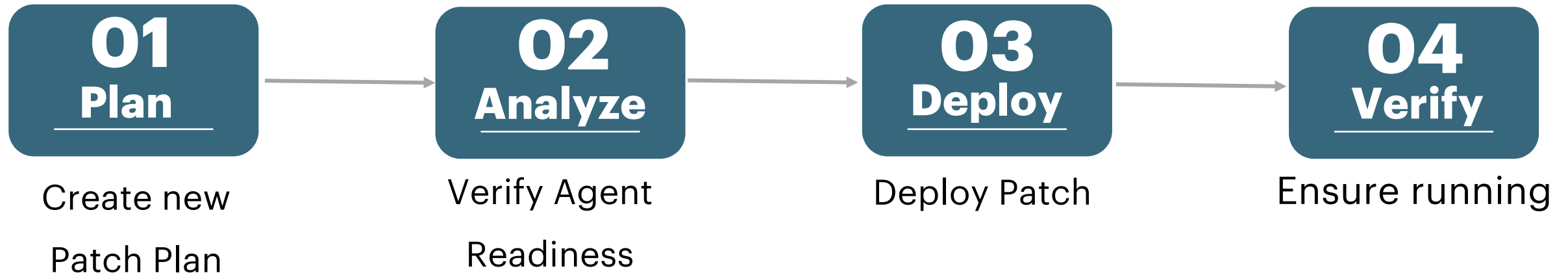
Online

- Create Patch Plan
- Apply
- Rollout

Offline

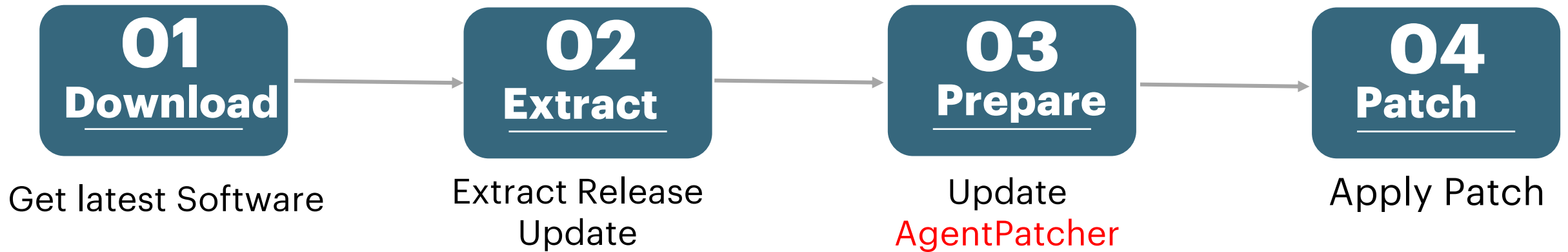
- Update Agentpatcher
- Apply
- Rollout

Oracle Management Agent – Online Patching



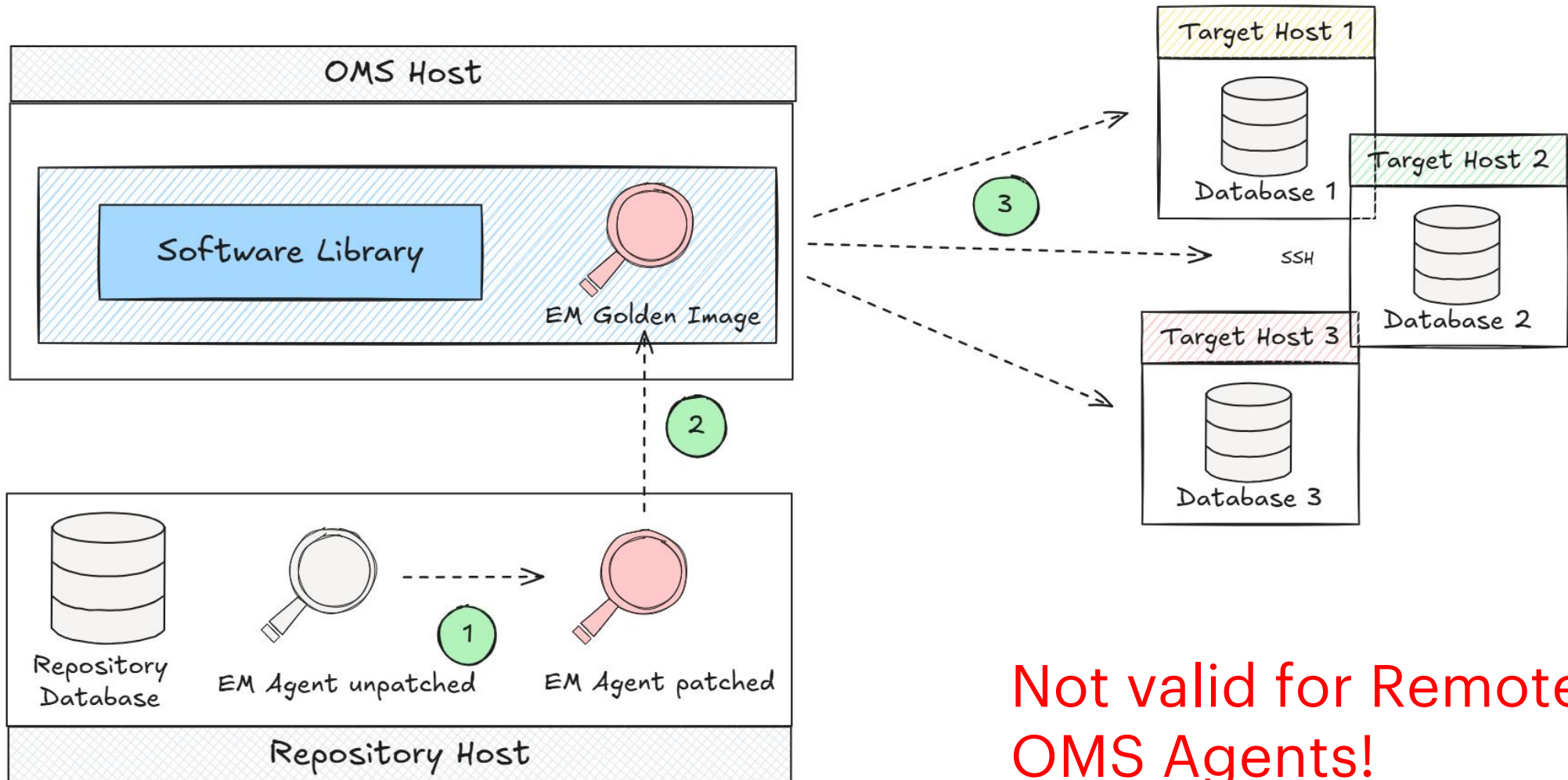
Automated Management Agent Patching Using Patch Plans is the Oracle recommended way.

Oracle Management Agent – Offline Patching



This is a perfect method for later usage of Agent Golden Images.

Management Agent Patching with Golden Image



Not valid for Remote or OMS Agents!



Golden Image EM24ai Dashboard

Gold Agent Images


Gold Agent Images > em24ai_agent_x64 (Image) > Manage Image : em24ai_agent_x64

Manage Image : em24ai_agent_x64

Subscribed Agents 3 Agents on Gold Image 0
Number of deployed Gold Image versions 0 Platform Name Linux x86-64


Versions And Drafts **Subscriptions**

Deployments



■ V1 Current (0)
■ Drifters (0)
■ No Version Deployed (3)

100.0%

View ▾  Detach **Subscribe** **Unsubscribe** **Update** ▾ **Add H**

| Target Name | Agent Version | Status | Image Version | Updated Status | Drifters |
|---------------------|---------------|--------|---------------------|----------------|----------|
| dbengine-dorna... | 24.1.0.0.0 | ↑ | No Version Deployed | Pending | — |
| dbengine-grenc... | 24.1.0.0.0 | ↑ | No Version Deployed | Pending | — |
| repo-solothurn.i... | 24.1.0.0.0 | ↑ | No Version Deployed | Pending | — |



Golden Agent Home Naming

Agent Directory List ls -latr

```
$ ls -latr
total 4
drwxrwxr-x. 13 oracle oinstall 171 Sep  4 22:29 ..
-rw-r--r--.  1 oracle oinstall 579 Sep  4 22:32 agentInstall.rsp
drwxr-xr-x.  4 oracle oinstall  70 Nov 12 20:11 .
drwxr-xr-x.  3 oracle oinstall 148 Nov 12 20:12 GoldImage_RU05
drwxr-xr-x. 11 oracle oinstall 154 Nov 12 20:12 agent_inst
```

Exclude Logs in Golden Images

Exclude Logs

```
$ emcli create_gold_agent_image -image_name="Linux_x86_64" -  
version_name="RU07" -source_agent= "oms-allinone.internal:3872" -  
exclude_files="agent_24.1.0.0.0/cfgtoollogs/*"
```

Update Agent JDK - 3084500.1

EM 24.1 AI: How to Use the Latest Certified JDK 8 Update with 24.1 Agents - KB518379

BEFORE

```
$ $AGENT_HOME/oracle_common/jdk/bin/java -version  
java version "1.8.0_431"  
Java(TM) SE Runtime Environment (build 1.8.0_431-b10)  
Java HotSpot(TM) 64-Bit Server VM (build 25.431-b10, mixed mode)
```

AFTER

```
$ $AGENT_HOME/jdk/bin/java -version  
java version "1.8.0_471"  
Java(TM) SE Runtime Environment (build 1.8.0_471-b26)  
Java HotSpot(TM) 64-Bit Server VM (build 25.471-b26, mixed mode)
```



Offline Plan Patching via Software Library

- Upload patch and metadata XML file to Saved Patches
- Create patch plan
- Apply patch
- Always initiated from OMS
- One single point of view

Saved Patches

Use this page to view a list of patches stored in the Software Library, search patches of your interest, upload these patches to Oracle products monitored in Enterprise Manager, create a [patch plan](#). For information available in the Enterprise Manager [Documentation Library](#).

TIP To upload batches of patches or to upload a multi-part patch, use the EM CLI verb "upload_patch"

View ▾ **+ Upload** **✕ Delete** Search Patch Name

| Patch Name | Description | Release |
|--------------------------|--|------------|
| 33355570 | AgentPatcher patch of version 13.9.25.1.0 for Enterprise Manager 24.1.0.0.0 (Patch) | 24.1.0.0.0 |
| 38155875 | Oracle Enterprise Manager 24ai Release 1 Update 5 (24.1.0.5) for Oracle Management Agent (Patch) | 24.1.0.0.0 |

Create New Plan

Plan Name *

+ Add

| Target Name | Target Type | Oracle Home | Host Name |
|--------------------|-------------|---------------------|-----------------------|
| oms-allinone.in... | Agent | /u01/app/oracle/... | oms-allinone.internal |



Plug-Ins

Plug-In Self-Update

Example OMS Plugin List RU 01

```
$ emcli list_plugins_on_server
```

```
OMS name is oms-allinone.internal:4889_Management_Service
```

| Plug-in Name [revision] | Plugin-id | Version |
|----------------------------|--------------------|------------|
| Oracle Cloud Framework | oracle.sysman.cfw | 24.1.1.0.0 |
| Oracle Database | oracle.sysman.db | 24.1.1.0.0 |
| Oracle Fusion Middleware | oracle.sysman.emas | 24.1.1.0.0 |
| Systems Infrastructure | oracle.sysman.si | 24.1.1.0.0 |
| Oracle Exadata | oracle.sysman.xa | 24.1.1.0.0 |



They are always included in RU. (other) Plugins must be updated manually or by Self-Update portal.



Self Update - Email Me

ORACLE Enterprise Manager 24ai

Search target names and

Incident Rules - All Enterprise Rules

A rule set is collection of rules that applies to a common set of objects, for example, targets, jobs, and templates. A rule contains a set of automated actions to be taken on specific events, incidents or problems.

▶ Event Compression Policies are enabled

Actions View Create Rule Set... View Edit... Delete... E-mail Import... Export... Simulate Rules Reorder Rule Sets...

| Name | Description | Enterprise Rule Set | Owner | Enabled | Use Event Compression Policy |
|--|--|---------------------|------------------|---------|------------------------------|
| ▶ Incident management rule set for all targets | Rule set to create and manage inci | ✓ | System Generated | Yes | Rule Level Compres |
| ▲ Event Management Rule set for Self Update | Rule set to manage Self Update ev | ✓ | System Generated | Yes | Rule Level Compres |
| Notification Rule for New Updates | Rule to notify on availability of new updates. | | | Yes | Yes |

E-mail dropdown menu:

- E-mail Me
- Do not E-mail Me
- E-mail another administrator ...
- Do not E-mail administrator ...



Misc

Notes and Patches Good to Know

- **KB410267**

13.5,24ai: How to Upgrade AgentPatcher to the Latest Version

- **KB371380**

EM 24ai: How To Upgrade Enterprise Manager 24.1 OMSPatcher Utility to the Latest Version

- **KB410267**

13.9.4.2.22 FOR EM 13.5/24.1 AND FMW/WLS 12.2.1.4.0, 14.1.1.0.0, 14.1.2.0.0 AND IDM 14.1.2.1 (Patch)

Offline - Catalog

- To get patch recommendations in offline mode, upload the latest catalog file in OEM.

Offline Patching

Information
Success: Connection is saved as offline mode.

Go online for optimal usability. Allow Enterprise Manager to connect to My Oracle Support to download patches, get the latest health checks, download self-updates and more. This is a one-way connection and outside services cannot connect to Enterprise Manager. No customer data is sent from Enterprise Manager to Oracle.

Connection Online Offline

Upload the catalog to keep Enterprise Manager up-to-date with patch recommendations.

Catalog No file selected.

https://updates.oracle.com/download/em_catalog.zip

EMCLI Method

```
$ emcli upload_catalog -from_host= "oms-allione-internal" -  
file="/u01/app/oracle/stage/em_catalog.zip"  
-cred_name="OMS_HOST_CRED" -cred_owner="SYSMAN"
```

Check Product Certification Matrix

| | | | | |
|----------------------------------|--|-------------------|-----------|---------|
| ▼ Linux x86-64 | SLES 15, SLES 12, Red Hat Enterprise Linux 9, Red Hat Enterprise Linux 8, Red Hat Enterprise Linux 7, Oracle Linux 9, Oracle Linux 8.x, Oracle Linux 7 | Operating Systems | | Primary |
| Linux x86-64 | SLES 15 | Operating Systems | Certified | Primary |
| Linux x86-64 | SLES 12 | Operating Systems | Certified | Primary |
| Linux x86-64 | Red Hat Enterprise Linux 9 | Operating Systems | Certified | Primary |
| Linux x86-64 | Red Hat Enterprise Linux 8 | Operating Systems | Certified | Primary |
| Linux x86-64 | Red Hat Enterprise Linux 7 | Operating Systems | Certified | Primary |
| Linux x86-64 | Oracle Linux 9 | Operating Systems | Certified | Primary |
| Linux x86-64 | Oracle Linux 8.x | Operating Systems | Certified | Primary |
| Linux x86-64 | Oracle Linux 7 | Operating Systems | Certified | Primary |
| ▼ Microsoft Windows x64 (64-bit) | 2022, 2019, 2016 | Operating Systems | | Primary |
| Microsoft Windows x64 (64-bit) | 2022 | Operating Systems | Certified | Primary |
| Microsoft Windows x64 (64-bit) | 2019 | Operating Systems | Certified | Primary |
| Microsoft Windows x64 (64-bit) | 2016 | Operating Systems | Certified | Primary |



Classic Error Messages

1

OMSPatcher supports only System patch. Please check patch location input

Check Path where you run patch command.

2

Before proceeding with the release update patch, you must first apply the mandatory one-off patch bundled with the OMSPatcher utility

Happens by first RU apply, command is provided, stop OMS first as mentioned.

3

This command deploy is not the supported operation in the online patching. Execute either ('lspatches', 'update', 'rollback deploy') command ...

Already run omspatcher deploy and OMS is ready for update command.

Takeaways

Know your Versions

Prefer ZDT, always.

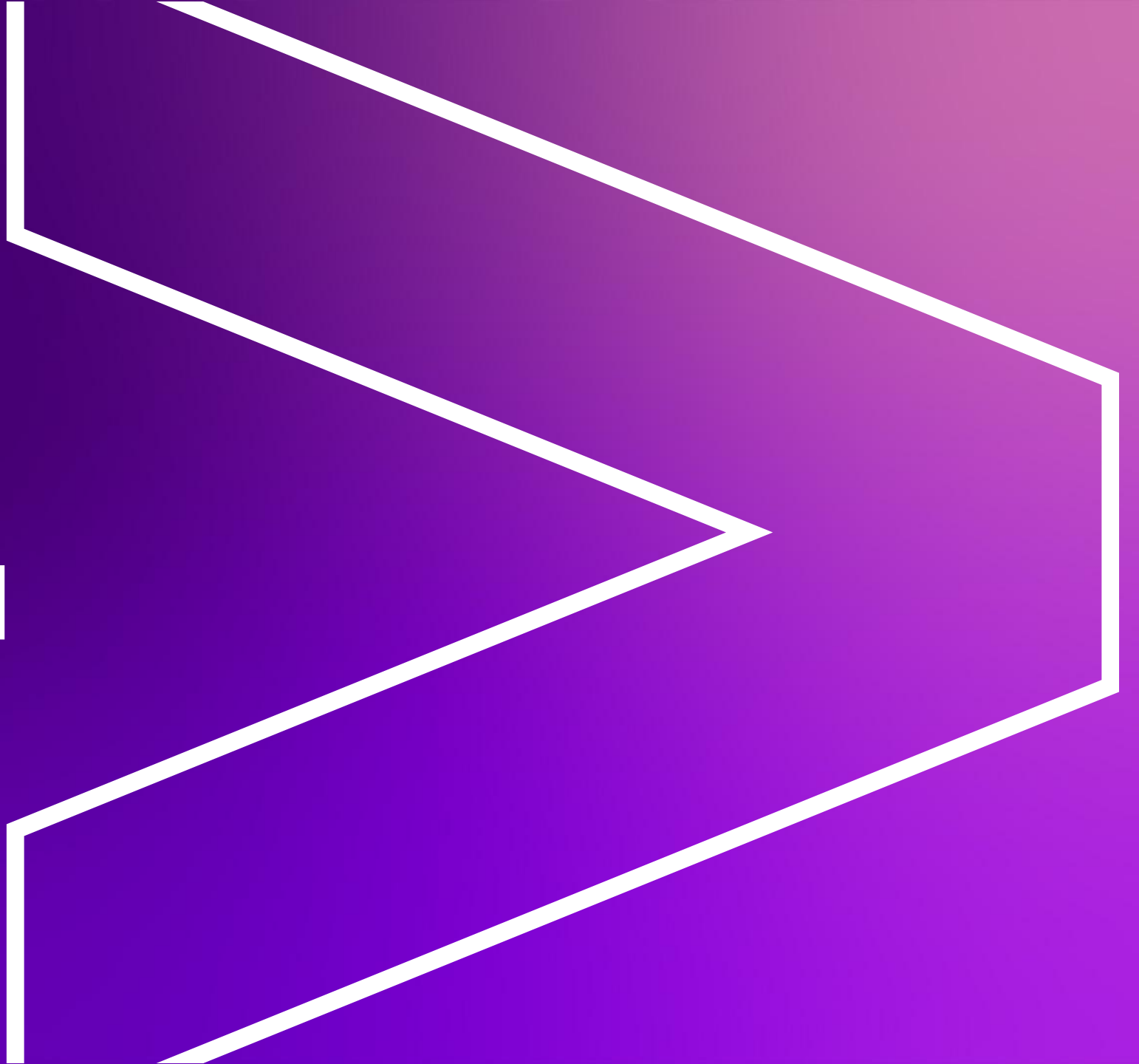
Backup. Analyze. Patch.

Use Golden Images.

Never lose Monitoring



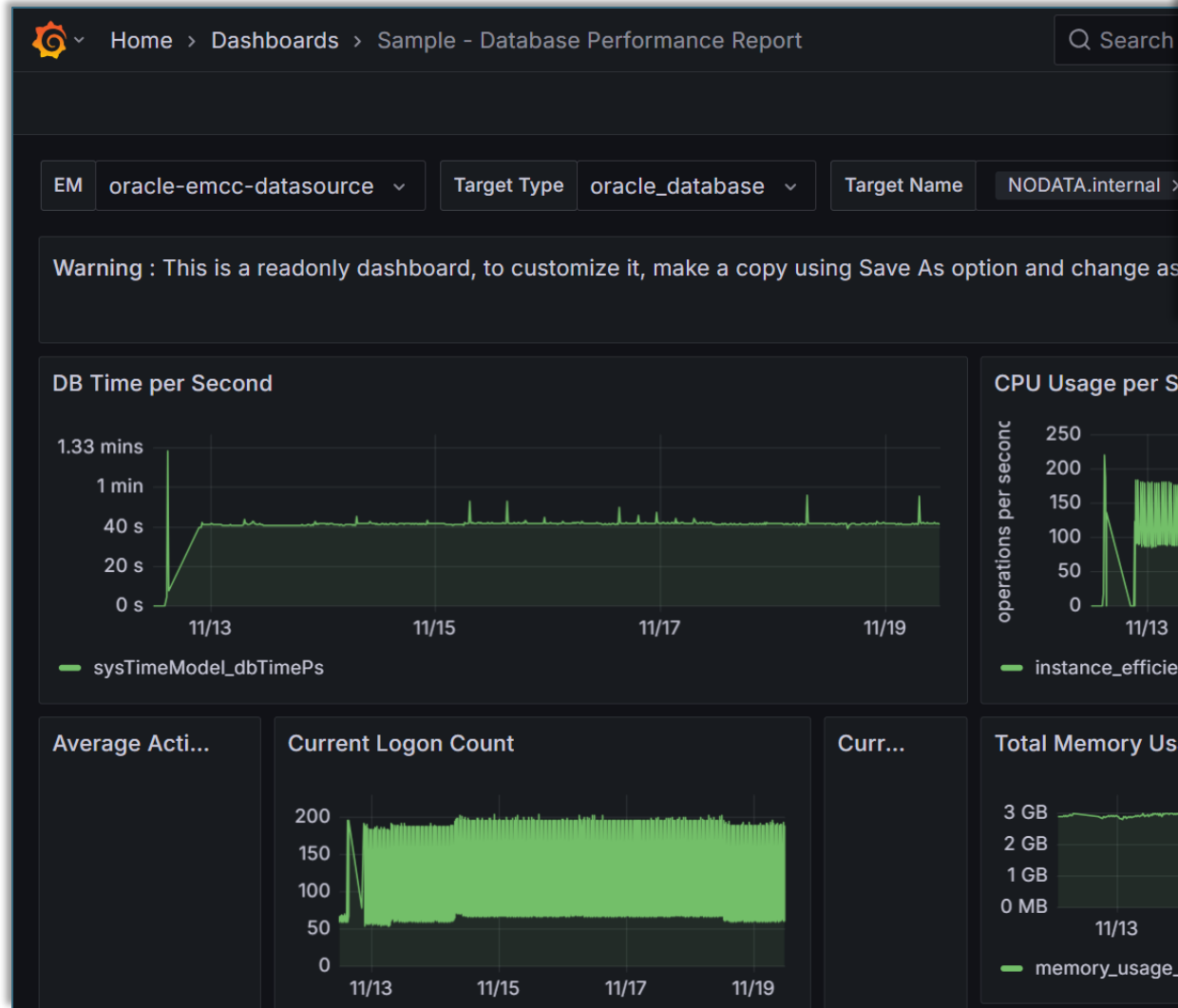
**Merci
vöuomou**



Features



Grafana - OEM App



ORACLE

Products Industries Resources Customers Partners Developers Company

Downloads /
Grafana Download page

Oracle Enterprise Manager App for Grafana

App Overview



REST API – Grab your Data

The screenshot displays the Bruno REST client interface. The top bar shows the user 'bruno' and the workspace 'EM24ai'. A toolbar includes 'Safe Mode', a clipboard icon, a list icon, a clock icon, a person icon, an eye icon, a gear icon, and a dropdown menu for 'No environments'. Below the toolbar, a row of request tabs is visible, with the active tab being a GET request to 'https://oms-ke...'. The main panel shows the details of this request: a GET method to the URL 'https://oms-kestenholz.internal:7803/em/api/targets/AA2DA3D2AE.../metricGroups/memory_usage/latestData'. The 'Params' tab is selected, showing a 'Query' section with an empty table for parameters. The 'Response' tab is also selected, displaying a 200 OK status with a response time of 5.43s and a size of 348B. The response body is a JSON object with the following structure:

```
1 {
2   "targetName": "NODATA.internal",
3   "targetTypeName": "oracle_database",
4   "targetId": "AA2DA3D2AE...FF245BC13794B2DF9C0",
5   "metricGroupName": "memory_usage",
6   "timeCollected": "2025-11-19T10:29:55.000Z",
7   "items": [
8     {
9       "total_memory": 3053.44
10    }
11  ],
12  "links": {
13    "self": {
14      "href": "/em/api/targets/AA2DA3D2AE...FF245BC13794B2DF9C0/metricGroups/memory_usage/latestData"
15    }
16  },
17  "count": 1
```

The 'items' array contains one object with the property 'total_memory' set to 3053.44, which is highlighted with a red box in the image.

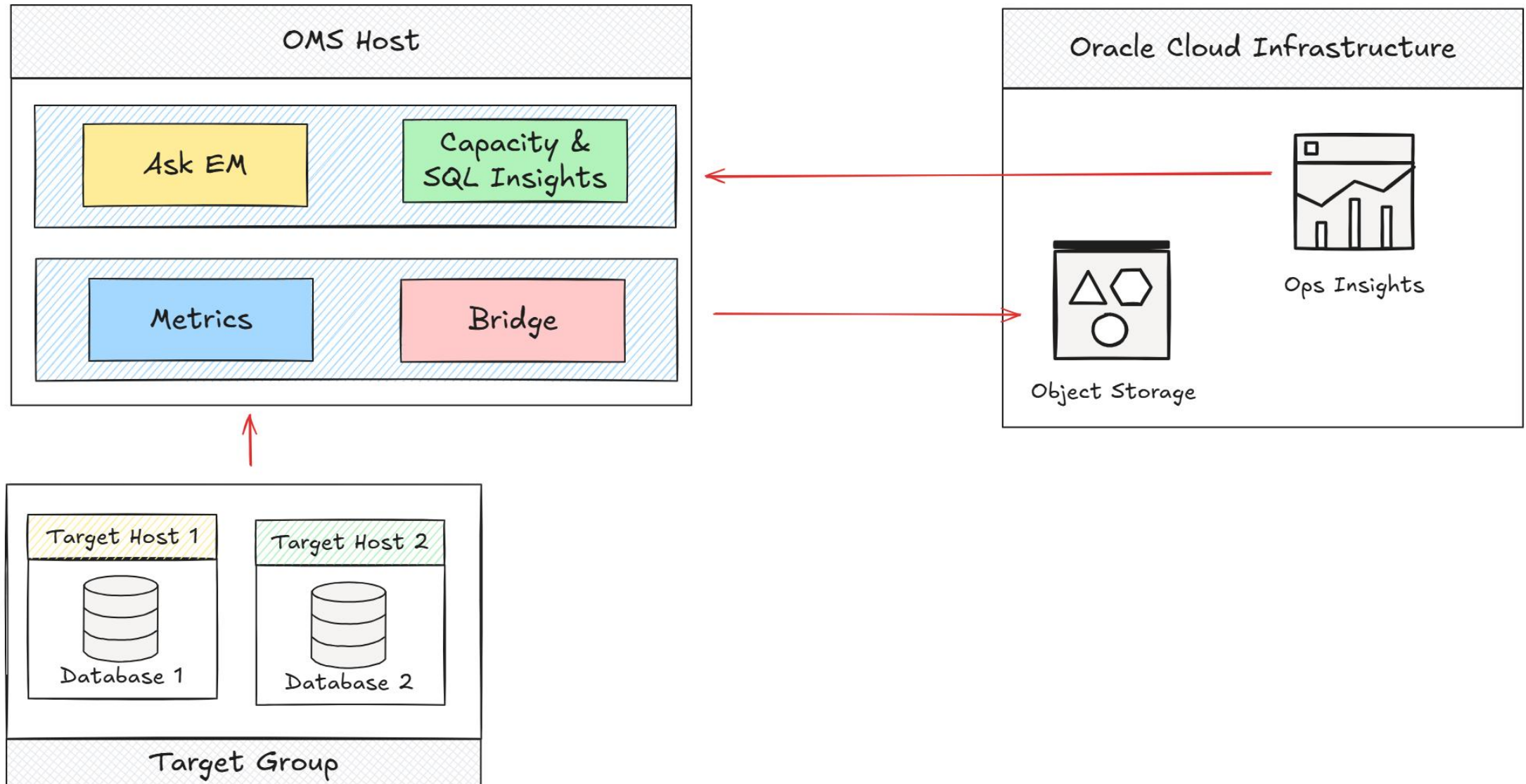


Oracle AutoUpgrade & EMCLI Blackouts

upgrade.config

```
# Global Settings
global.autoupg_log_dir=/u01/app/oracle/cfgtoollogs/autoupgrade
upg1.log_dir=/u01/app/oracle/cfgtoollogs/autoupgrade
upg1.sid=ORANGE
upg1.source_home=/u01/app/oracle/product/19.0.0/dbhome_1
upg1.target_home=/u01/app/oracle/product/19.0.0/dbhome_2
upg1.start_time=NOW
upg1.upgrade_node=dbengine02.internal
upg1.emcli_path=/u01/app/oracle/emcli
upg1.em_target_name=ORANGE.internal
upg1.em_blackout_suffix=snc1724o195
```

Ask EM & OCI Operation Insights



EM-Bridge – The OCI Integration

ORACLE Enterprise Manager 24ai

Search target names and menus

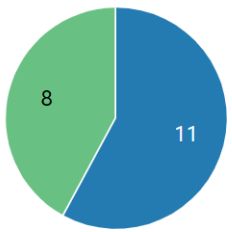
SYSMAN

Page Refreshed Nov 15, 2025 6:11:40 AM CET

Cloud Bridge

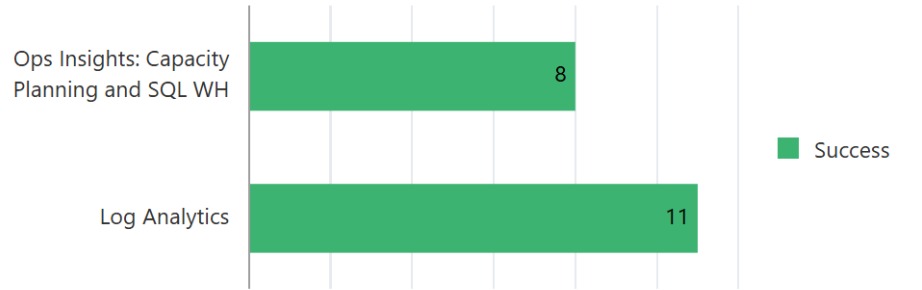
Enable Data Export Manage OCI Connectivity

EM Target Summary



| | |
|--|----|
| Log Analytics | 11 |
| Ops Insights: Capacity Planning and SQL WH | 8 |

Data Export Summary



| | |
|--|----|
| Ops Insights: Capacity Planning and SQL WH | 8 |
| Log Analytics | 11 |

Upload Summary

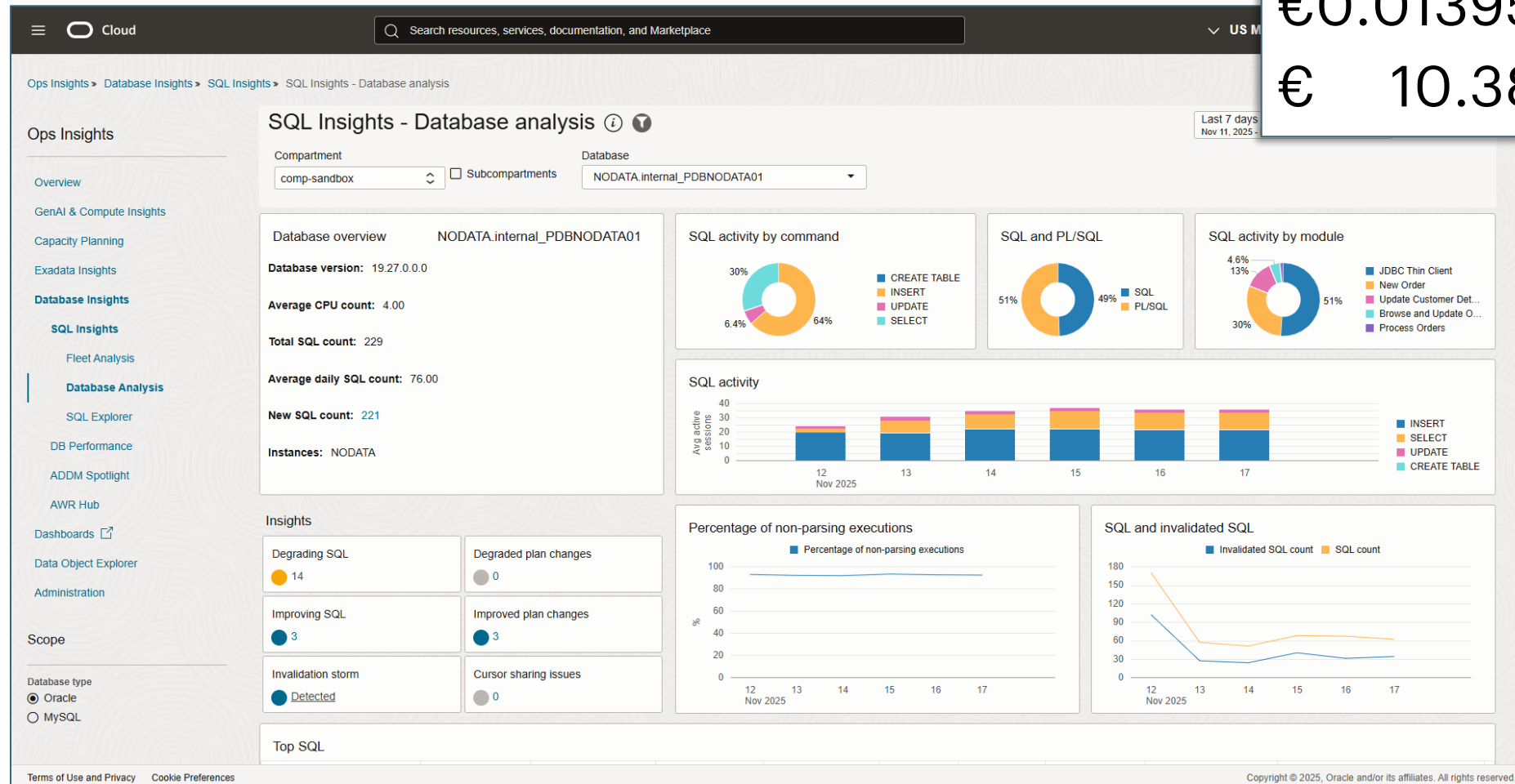
| OCI Service | Size (MB) | Last Upload Date | Service Status |
|--|-----------|------------------------------|----------------|
| Ops Insights: Capacity Planning and SQL WH | 65.35 | NOV 15, 2025 06:04:51 AM GMT | ✓ |
| Log Analytics | 0.93 | NOV 15, 2025 06:04:08 AM GMT | ✓ |



OCI Operations Insights

Example for External Oracle Databases and Host

Host CPU Core Per Hour
€0.01395 pro Stunde
€ 10.38 pro Monat



Ask EM

ORACLE Enterprise Manager 24ai

🔔
SYSMAN
🗨️

Time Selector

Last 24 hours

Nov 17 17:11 - Tod...

Databases Incidents Last 7 Days

| Sever | Summary | Target Name | Target Type | Status | Create | La Updat | Owr |
|-------|---------------------------|-------------|-------------|--------|--------|----------|-----|
| ⊖ | The pluggable database H | HRDATA_S | Plu... | New | 20... | 20... | - |
| ⊖ | The pluggable database H | HRDATA_S | Plu... | New | 20... | 20... | - |
| ⊗ | The pluggable database is | HRDATA_S | Plu... | New | 20... | 20... | - |
| ⊗ | The pluggable database is | HRDATA_S | Plu... | New | 20... | 20... | - |

Databases Critical Incidents

| Sever | Summary | Target Name | Target Type | Status | Create | La Updat | Owr |
|-------|----------------------------|-------------|-------------|--------|--------|----------|-----|
| ⊗ | The pluggable database is | HRDATA_S | Plu... | New | 20... | 20... | - |
| ⊗ | The pluggable database is | HRDATA_S | Plu... | New | 20... | 20... | - |
| ⊗ | The database status is UNI | HRDATA_S | Dat... | New | 20... | 20... | - |

Databases Fatal Incidents ⓘ

| Sever | ↑ Summary | Target Name | Target Type | Status | Created | Last Updated | Owner | Acknov | Escala |
|-------|--|------------------------|-----------------|--------|-------------|--------------|-------|--------|--------|
| ⊖ | The pluggable database HRDATA_SITE1.internal_PDBF | HRDATA_SITE1.internal_ | Pluggable D... | New | 2025-11-... | 2025-11-... | - | No | No |
| ⊖ | The pluggable database HRDATA_SITE1.internal_CDBF | HRDATA_SITE1.internal_ | Pluggable D... | New | 2025-11-... | 2025-11-... | - | No | No |
| ⊖ | Failed to connect to database instance: Failed to connec | HRDATA_SITE1.internal | Database Ins... | New | 2025-11-... | 2025-11-... | - | No | No |

Ask EM

Ask EM is in preview mode. We are constantly working to improve the accuracy and quality of our GenAI generated response.

Telemetry
Documentation

Today at 6:10 PM

Hi! I'm your GenAI-powered EM Digital Assistant. You can ask me any question about EM. I can provide answers from the EM telemetry and share references.

Do we have a problem with a database monitored by this instance?

Today at 6:11 PM

I have some findings for your review

Open

Enter message

👉



Ask EM

ORACLE Enterprise Manager 24ai

Search target names and menus

Time Selector: Last 24 hours (Nov 17 17:13 - To...)

Autonomous Transaction Processing: RESTDB

Database Instance Storage Usage (GB)

| Target Name | Target Type | Value (Latest) |
|---------------------------------------|-------------------|----------------|
| NODATA.internal | Database Instance | 35.92 |
| EM24AI_SITE1.internal | Database Instance | 24.07 |
| ITAB01_A.sndatabasepubli.vcncompute.c | Database Instance | 3.77 |
| HRDATA_SITE1.internal | Database Instance | 3.54 |
| ITAB02_A.sndatabasepubli.vcncompute.c | Database Instance | 3.26 |

Autonomous Transaction Processing Storage Usage (bytes)

| Target Name | Target Type | Value (Latest) |
|-------------|-------------------------|----------------|
| RESTDB | Autonomous Transacti... | 6,170,869,760 |

Autonomous Transaction Processi...

Autonomous Transaction Processing Storage Utilization (%)

| Target Name | Target Type | Value (Latest) |
|-------------|----------------------------------|----------------|
| RESTDB | Autonomous Transaction Proces... | 28.74 |

Ask EM

Ask EM is in preview mode. We are constantly working to improve the accuracy and quality of our GenAI generated response.

Telemetry
Documentation

the EM telemetry and share references.

Connection established 6:10 PM

Do we have a problem with a database monitored by this instance?

Today at 6:11 PM

I have some findings for your review

Open

Which database monitored by this instance has the highest storage usage?

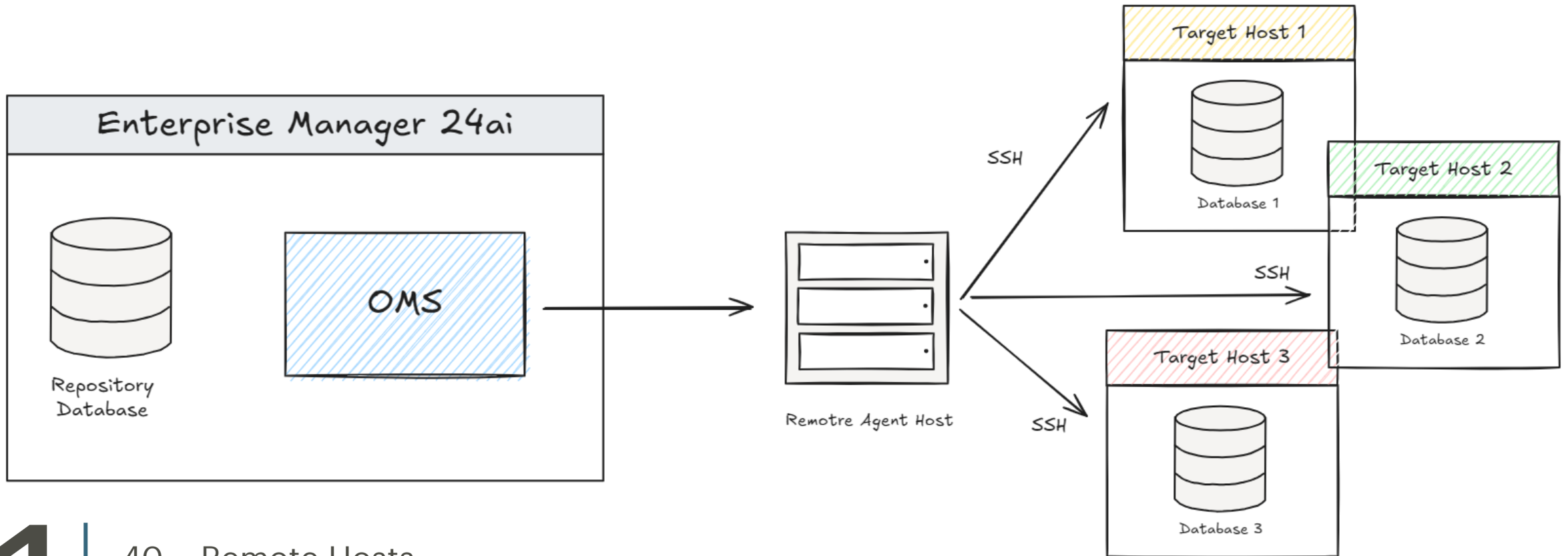
Today at 6:13 PM

Some additional findings shown on the left

Enter message



Remote Agent



- 1 40 Remote Hosts
- 80 Single Instances (CDB)
- 480 Pluggable Databases (PDBs)
- 40 RAC Databases



NON-SYS

- Performs Enterprise Manager installation, configuration and patching operations. (The SYS database user is no longer required during the installation, configuration and patching).
- User is created during the execution of the ConfigureGC script (Enterprise Manager configuration).
- Naming convention: **SYSMAN_** is the username prefix.

createLCMUser.pl

```
$OMS_HOME/perl/bin/perl \  
createLCMUser.pl \  
-oh /u01/app/oracle/middleware/oms_home
```

NON-SYS

- OMSPatcher Interactive

```
omspatcher

$ORACLE_HOME/OMSPatcher/omspatcher deploy -analyze -property_file
/u01/app/oracle/middleware/wlskeys/24ai.properties
OMSPatcher Automation Tool
Copyright (c) 2024, Oracle Corporation. All rights reserved.

OMSPatcher version : 13.9.24.8.0
<REDACTED>
<REDACTED>
Enter SYS or Non-SYS (Admin User) username: Enter SYS or Non-SYS (Admin User) username:
```



sysman.mgmt_oms_parameters

sysman.mgmt_oms_parameters

```
SQL> SELECT name, value, timestamp  
2 FROM sysman.mgmt_oms_parameters  
3 WHERE name = 'last_oms_backup';
```

| NAME | VALUE | TIMESTAMP |
|-----------------|--|-----------|
| last_oms_backup | /u01/app/oracle/stage/backup/opf_ADMIN_20261116_195812.bka | 16-NOV-25 |

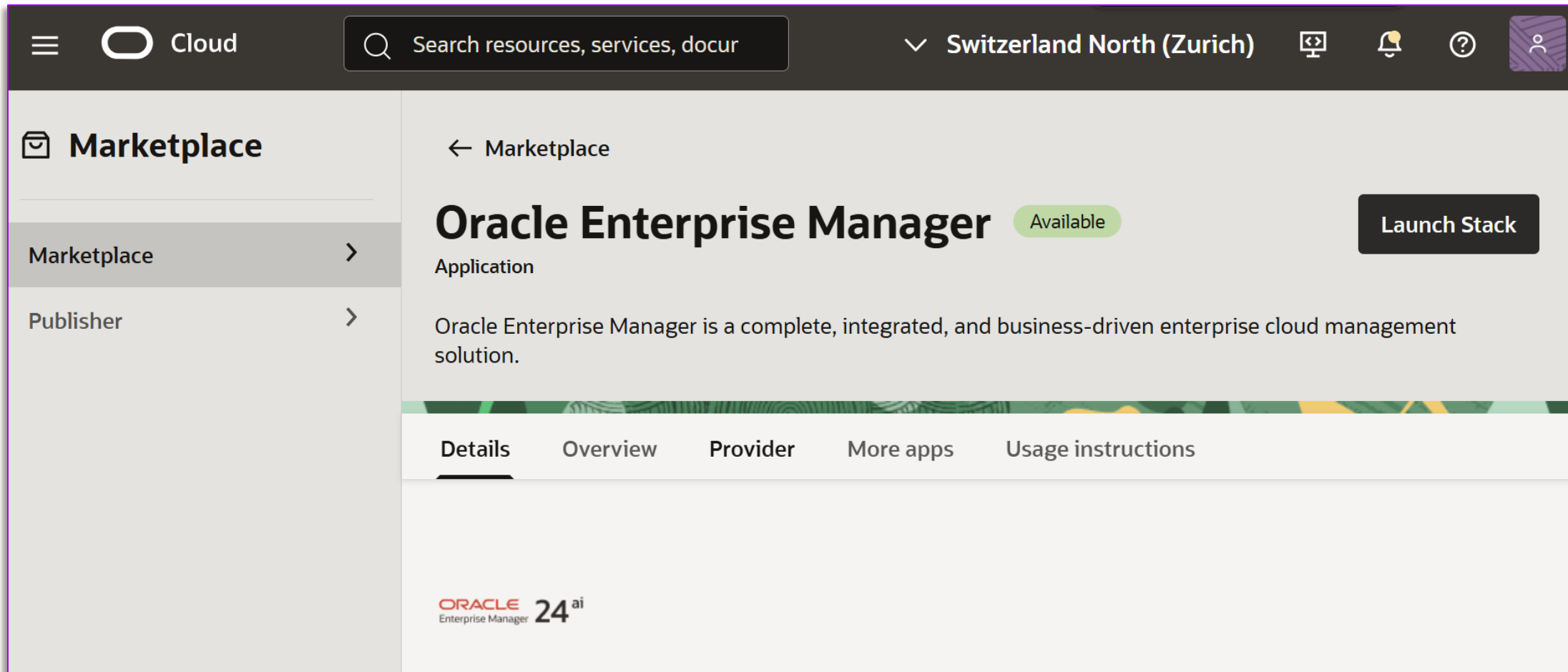
Backup Content - ZDT Included

emctl exportconfig - opf_ADMIN_20261116_195812.bka

```
oracle@oms-kestenholz:/u01/app/oracle/stage/backup/ [oms24c1] tree -L 3
```

```
.
├── export.properties
├── GCDomain_backup.zip
├── omrWallets
│   └── cwallet.sso
├── opf_ADMIN_20261116_195812.bka
├── plugins.list
├── sysman
│   └── prov
│       └── agentpush
├── user_projects
│   └── domains
│       ├── EMExtDomain1
│       └── GCDomain
```

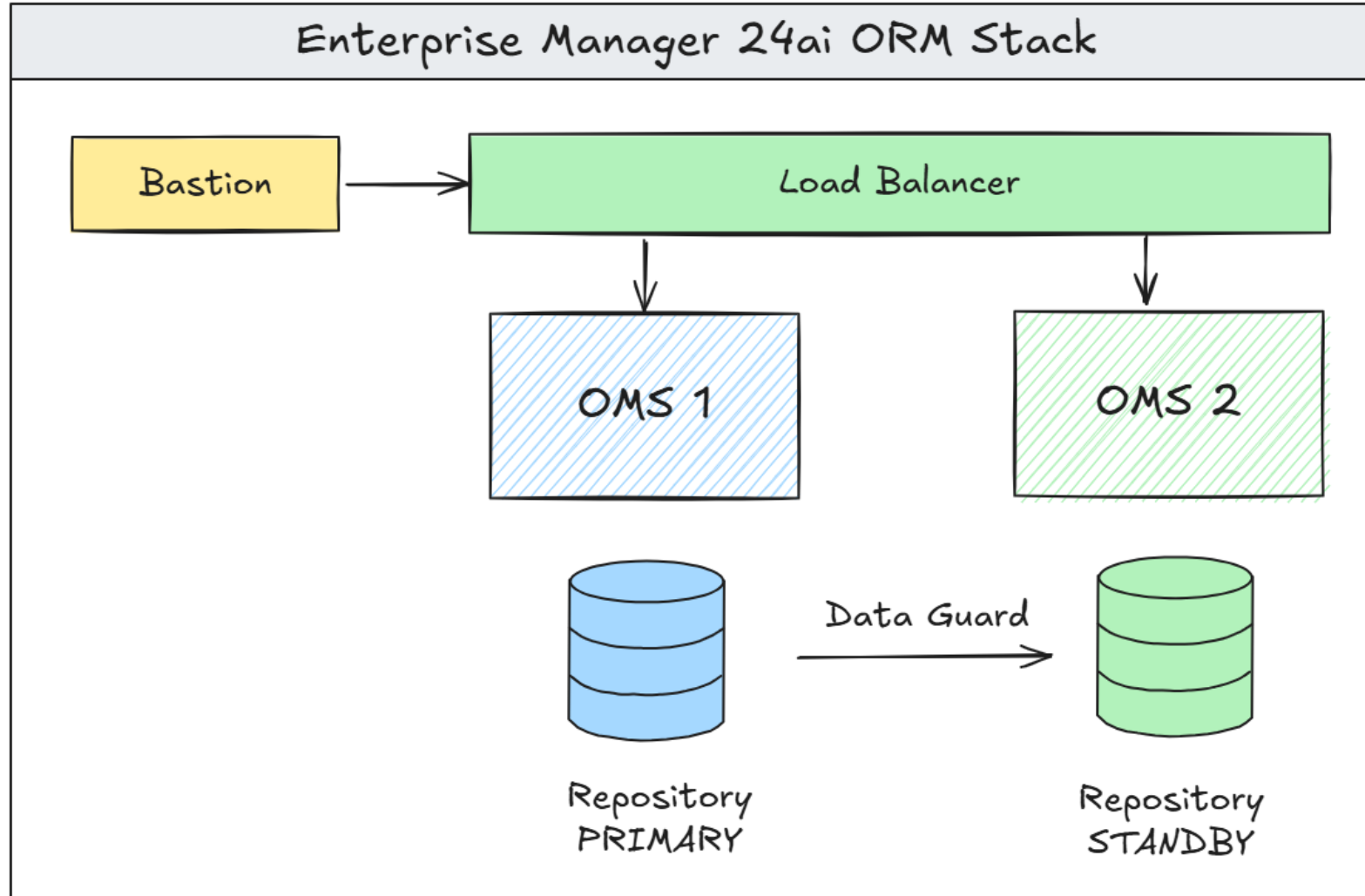
Try it out – OCI Marketplace



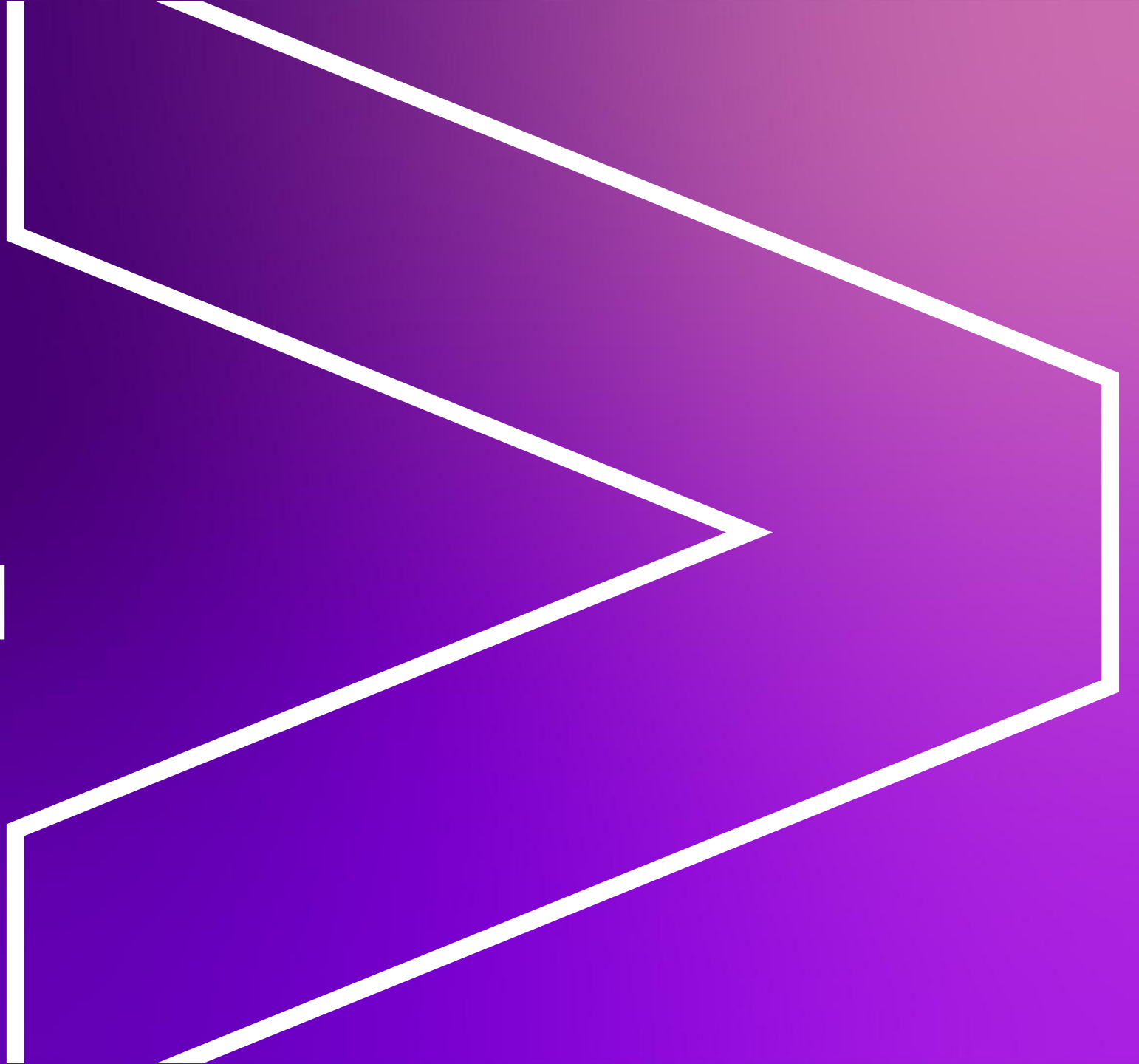
The screenshot displays the OCI Marketplace interface. At the top, there is a navigation bar with a hamburger menu, the 'Cloud' logo, a search bar containing 'Search resources, services, docur', and a dropdown menu set to 'Switzerland North (Zurich)'. Below the navigation bar, the left sidebar shows 'Marketplace' and 'Publisher' sections. The main content area features a breadcrumb '← Marketplace', the title 'Oracle Enterprise Manager' with an 'Available' badge, and a 'Launch Stack' button. The application is described as 'Application' and 'Oracle Enterprise Manager is a complete, integrated, and business-driven enterprise cloud management solution.' Below the description, there are tabs for 'Details', 'Overview', 'Provider', 'More apps', and 'Usage instructions'. At the bottom, the Oracle logo and '24^{ai} Enterprise Manager' are visible.

Pre-configured Oracle Enterprise Manager 24ai (version - 24.1RU05) with co-located Oracle database (version - 19.28.0.0) for single node configuration and OCI 2-node RAC DB system for Multi-node configuration as Oracle Management Repository (OMR).

Try it out – OCI Marketplace



**Merci
vöuomou**



Additional – Plugin Version Check

Query Plugin

```
select epv.display_name,  
       epv.plugin_id,  
       epv.version,  
       ecp.dest_type  
  from em_plugin_version epv,  
       em_current_deployed_plugin ecp  
 where epv.plugin_type not in ( 'BUILT_IN_TARGET_TYPE',  
                                'INSTALL_HOME' )  
       and ecp.dest_type in ('1','2')  
       and epv.plugin_version_id = ecp.plugin_version_id  
 order by 1,2;
```

- 1=Agent / 2=OMS / 3=Both



Additional – Plugin Version Check EMCLI

RU01

- Out of the Box

```
oracle@oms-allinone:~/ [oms24c1] emcli list_plugins_on_server
```

```
OMS name is oms-allinone.internal:4889_Management_Service
```

| Plug-in Name | Plugin-id | Version [revision] |
|--------------------------|--------------------|--------------------|
| Oracle Cloud Framework | oracle.sysman.cfw | 24.1.1.0.0 |
| Oracle Database | oracle.sysman.db | 24.1.1.0.0 |
| Oracle Fusion Middleware | oracle.sysman.emas | 24.1.1.0.0 |
| Systems Infrastructure | oracle.sysman.si | 24.1.1.0.0 |
| Oracle Exadata | oracle.sysman.xa | 24.1.1.0.0 |

-> Only when DB Plugin for Agent is deployed

```
oracle@oms-allinone:~/ [oms24c1] emcli list_plugins_on_agent
```

```
The Agent URL is https://oms-allinone.internal:3872/emd/main/ -
```

| Plug-in Name | Plugin-id | Version [revision] |
|------------------------------------|----------------------|--------------------|
| Oracle Home | oracle.sysman.oh | 24.1.0.0.0 |
| Oracle Beacon | oracle.sysman.beacon | 24.1.0.0.0 |
| Management Services and Repository | oracle.sysman.emrep | 24.1.0.0.0 |
| Oracle Fusion Middleware | oracle.sysman.emas | 24.1.1.0.0 |



Patch Upload

- File + Metadata is best!

File Download ⓘ

Click each file name to download the selected files.
Tip: Use a Download Manager [Learn More...](#)

Oracle Enterprise Manager 24ai Release 1 Update 5 (24.1.0.5) for Oracle Management Agent(Patch:Generic Platform)

[p38155875_241000_Generic.zip](#) (147.6 MB)

Total Size 147.6 MB

[Download File Metadata](#) [View Digest Details](#) [Close](#)

ORACLE Enterprise Manager 24ai Search target names and menus 🔍 🔔 SYSMAN

Confirmation
Successfully uploaded patch 33355570.

Saved Patches

Use this page to view a list of patches stored in the Software Library, search patches of your interest, upload new patches to the Software Library, and remove unwanted patches from the Software Library. If you want to apply these patches to Oracle products monitored in Enterprise Manager, create a [patch plan](#). For information about creating patch plans, refer to Oracle Enterprise Manager Lifecycle Management Administrator's Guide available in the Enterprise Manager [Documentation Library](#).

TIP To upload batches of patches or to upload a multi-part patch, use the EM CLI verb "upload_patches". For information on this verb, run the command "emcli help upload_patches".

View + Upload × Delete 🔍 🖨️ Detach

| Patch Name | Description | Release | Platform(Language) | Product/Family | Update | Size |
|------------|--|------------|-------------------------------------|----------------------------------|---------------|----------|
| 38155875 | Oracle Enterprise Manager 24ai Release 1 Update 5 (24.1.0.5) for Oracle Management Agent (Patch) | 24.1.0.0.0 | Generic Platform (American English) | Enterprise Manager Base Platform | 5+ months ago | 147.6 MB |
| 33355570 | AgentPatcher patch of version 13.9.25.1.0 for Enterprise Manager 24.1.0.0.0 (Patch) | 24.1.0.0.0 | Generic Platform (American English) | Enterprise Manager Base Platform | 1+ month ago | 823.8 KB |



RU08

```
oracle@oms-kestenholz:/u01/app/oracle/middleware/oms_home/cfgtoollogs/omspatcher/38735203/ [oms24c1] tail -  
20 omspatcher_2026-04-04_21-54-21PM_apply.log
```

```
Repository Creation Utility - ApplyRepositoryPatch : Operation Completed  
, return code= 0, exec. ok= true]
```

```
[Apr 4, 2026 10:40:17 PM] Executed zdtloademlcm sql successfully  
[Apr 4, 2026 10:40:17 PM] Checking if DB user 'sys' is allowed to perform patching operation.  
[Apr 4, 2026 10:40:17 PM] DB user name: SYSMAN is used for db connection  
[Apr 4, 2026 10:40:17 PM] Calling changeLCMEdition for edition:EM241RPU5  
[Apr 4, 2026 10:40:17 PM] Switched to patch edition EM241RPU5  
[Apr 4, 2026 10:40:17 PM] Checking if EMLCMPackageExist in repository.  
[Apr 4, 2026 10:40:18 PM] EMLCMPackageExist in the repository.  
[Apr 4, 2026 10:40:18 PM] The result code of is_lcm_adminuser ::: 1  
[Apr 4, 2026 10:40:18 PM] sys is a valid LCM ADMIN user.  
[Apr 4, 2026 10:40:18 PM] Create edition at db-level is successful !!  
[Apr 4, 2026 10:40:18 PM] DB user name: SYSMAN is used for db connection  
[Apr 4, 2026 10:40:18 PM] Setting the patching context for the new edition ....  
[Apr 4, 2026 10:40:18 PM] Calling changeLCMEdition for edition:EM241RPU5  
[Apr 4, 2026 10:40:18 PM] Switched to patch edition EM241RPU5  
[Apr 4, 2026 10:40:18 PM] The sql file  
:/u01/app/oracle/middleware/cloneOMSHome_24100/sysman/admin/emdrep/sql/core/latest/admin/admin_set_zdt_lcm_  
context.sql
```

```
[Apr 4, 2026 10:40:53 PM] Setting the patching context for the new edition at db-level is successful !!  
[Apr 4, 2026 10:40:53 PM] Executing the command : /u01/app/oracle/middleware/oms_home/OPatch/opatch  
napply /u01/app/oracle/stage/38735203 -oh /u01/app/oracle/middleware/cloneOMSHome_24100 -invPtrLoc  
/u01/app/oracle/middleware/cloneOMSHome_24100/oraInst.loc
```

```
[Apr 4, 2026 10:40:53 PM] Applying sub-patch(es) "38733813,38733818,38733821,38733833,38733839,38733850"
```